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Heart Failure and Cardiomyopathies

ISCHEMIC CARDIOMYOPATHY IS ASSOCIATED WITH PLAQUE PROGRESSION AND HIGHER EVENT RATE IN PATIENTS POST-CARDIAC TRANSPLANTATION

Moderated Poster Contributions
Hall C
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Session Title: Heart Failure and Cardiomyopathies IV
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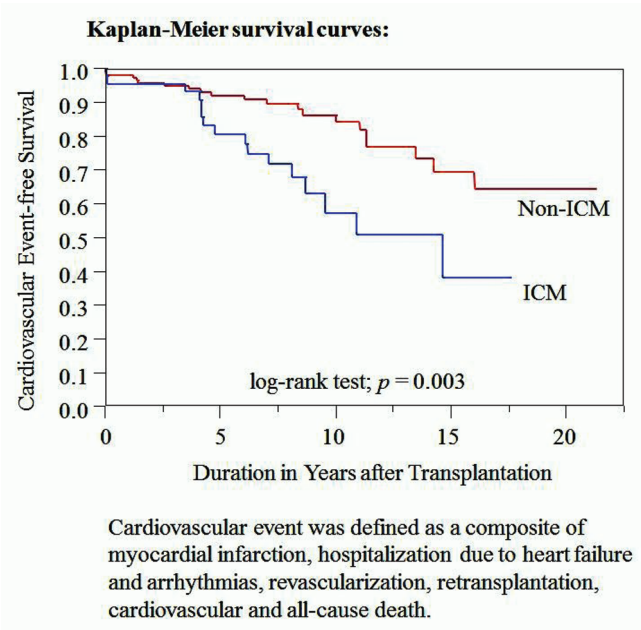
Background: Cardiac allograft vasculopathy (CAV) is the leading cause of graft failure and death in heart transplant (HTx) recipients. However, the association between the etiology of heart failure (ischemic [ICM] or non-ischemic cardiomyopathy [non-ICM]) that led to HTx and progression of CAV, and adverse events after HTx has not been explored. We examined whether prior history of ICM or non-ICM contributes more to coronary atherosclerotic plaque progression and adverse events in HTx subjects.

Methods: We retrospectively included 165 HTx patients, who were followed-up with at least two intravascular ultrasound (IVUS) examinations post-HTx, and grouped them into ICM (n = 46) or non-ICM (n = 119). Coronary artery plaque volume was analyzed using IVUS and cardiovascular event data was collected from medical records of all the study subjects.

Results: ICM patients had a significantly greater plaque volume at follow-up IVUS examination (p = 0.015) compared with non-ICM patients. After multivariate adjustment for traditional coronary risk factors, ICM was significantly associated with plaque progression (OR 2.76; CI 1.04-8.26; p = 0.03). Also, ICM was associated with significantly lower cardiovascular event-free survival (Figure), and higher event rate after HTx in multivariate analysis (HR 2.05, 95% CI 1.03-4.04, p = 0.04).

Conclusions: Our study demonstrates that ischemic etiology of cardiomyopathy that led to HTx may be an independent predictor of plaque progression and higher event rate after HTx.



Cardiovascular event was defined as a composite of myocardial infarction, hospitalization due to heart failure and arrhythmias, revascularization, retransplantation, cardiovascular and all-cause death.